Charles Darwin University

Final Examination

Family Name						
Given Name/s						
Student Number						
Teaching Period	Semester 2, 2017					

MLS101 – Haematology 1	DURATION	
	Reading Time:	10 minutes
	Writing Time:	120 minutes

INSTRUCTIONS TO CANDIDATES

Section A should be answered on the Answer Sheet provided. Please ensure that your name and student number have been written on the Answer sheet and place in the completed answer Booklet.

Section B should be answered in separate booklets.

Questions in section A and Section B are NOT of equal value. Please see each section for allocated marks.

EXAM CONDITIONS

You may begin writing from the commencement of the examination session. The reading time indicated above is provided as a guide only.

This is a CLOSED BOOK examination

Any calculator is permitted

No handwritten notes are permitted

No dictionaries are permitted

ADDITIONAL AUTHORISED MATERIALS	EXAMINATION MATERIALS TO BE SUPPLIED
No additional printed material is permitted	1 x 8 Page Book 1 x 4-Multiple Choice Answer Sheet School Multiple Choice Answer Sheet

THIS EXAMINATION IS PRINTED DOUBLE-SIDED.

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Section A

Multiple Choice Questions

Total No of Marks for this section: (60)

This section should be answered on the Answer Sheet provided. Please ensure that your name and student number have been written on the Answer sheet and place in the completed answer Booklet.

Each question is worth 1 mark. Suggested Time allocation for Section A: 70 minutes

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END OF SECTION A

Section B

Short answer

Total Number of marks for this section: (40)

This section should be answered in separate booklets.
Instructions for each test have been given separately.
Suggested Time allocation for Section B: 50 minutes
Four questions, each worth 10 marks

Question 1

Clinical history

A 32-year-old man gradually noticed that he had 'yellow eyes' and dark urine, felt continually tired and was short of breath when climbing stairs. He had no other symptoms and he was not on any particular medicine. On examination slight splenomegaly was noticed otherwise normal. His FBC results and blood picture are provided bellow:

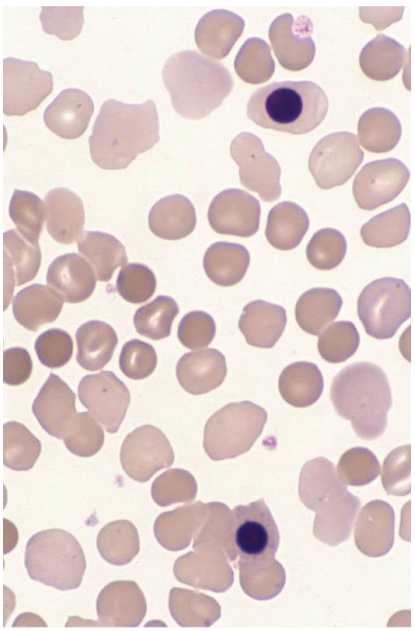
Laboratory findings

Haematology

Test		Normal range
WBC:	37	5.0-17.0 × 10^9/L
RBC:	1.6	4.0-5.23 × 10^{12}/L
Hb:	5.4	10.2-15.2 g/dL
HCT:	18	36-45 %
MCV:	78	78-94 fL
MCH:	34.4	23-31 pg
MCHC:	41.5	32-36 g/dL
RDW:	22	11.5-14.5%
Plt:	48	150-450 × 10^9/L
Retic	9	0.5-2.5%

Biochemistry (serum)

Total Bilirubin	35	5-17 mmol/L
LDH	4850	140-280 U/L



Describe your findings and write a reprot while considering these questions:

1. What are the significant morphologic changes you see in blood film?
2. How these morphologic abnormality relates to the FBC indices and clinical symptoms?
3. What is the possible diagnosis and what other laboratory test you may suggest to help the acurate diagnosis?

Question 2

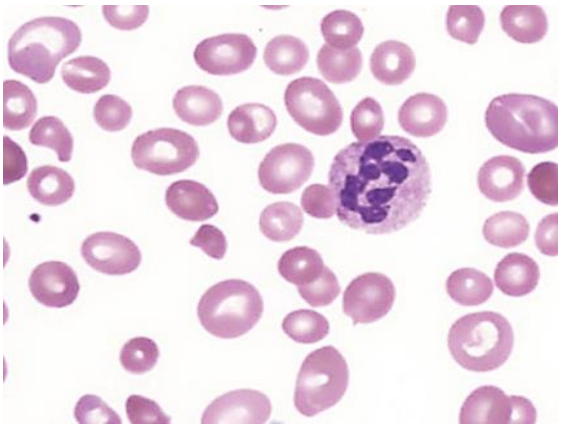
Clinical history

A 76-year-old man has recently been noticed by his family to be more forgetful than usual and has recently shown difficulty in walking for being fatigue and he looks pale. Concerned about the possibility of a mild stroke, his children took him to his physician. His FBC results and blood picture are provided bellow:

Laboratory findings

Haematology

Test		Normal range
WBC:	3.2	5.0-17.0 × 10^9/L
RBC:	2.8	4.0-5.23 × 10^{12}/L
Hb:	8.4	10.2-15.2 g/dL
HCT:	27	36-45 %
MCV:	123	78-94 fL
MCH:	38.4	23-31 pg
MCHC:	31.5	32-36 g/dL
RDW:	18	11.5-14.5%
Plt:	115	150-450 × 10^9/L
Retic	1.5	0.5-2.5%



Describe your findings and write a reprot while considering these questions:

1. what are the significant morphologic changes you see in blood film?

2. How these morphologic abnormality relates to the FBC indices and clinical symptoms?

3. What is the possible diagnosis and what other laboratory test you may suggest to help the acurate diagnosis?

Question 3

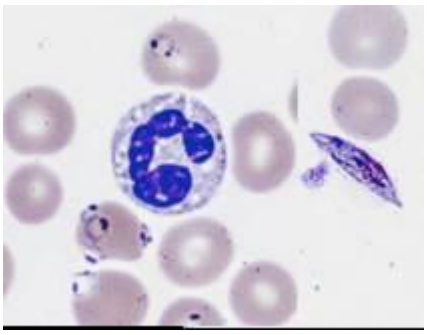
Clinical history

A 28-year-old student is seen at a physician's office after returing back from his holiday in Africa for runing fever and chill and feeling tired recently. His FBC results and blood picture are provided bellow:

Laboratory findings

Haematology

Test		Normal range
WBC:	6.2	5.0-17.0 × 10^9/L
RBC:	4.9	4.0-5.23 × 10^{12}/L
Hb:	13.4	10.2-15.2 g/dL
HCT:	41	36-45 %
MCV:	79	78-94 fL
MCH:	30.4	23-31 pg
MCHC:	31.5	32-36 g/dL
RDW:	11	11.5-14.5%
Plt:	180	150-450 × 10^9/L
Retic	1.9	0.5-2.5%



Describe your findings and write a reprot while considering these questions:

1. what's are the significant morphologic changes you see in blood film.?

2. How these morphologic abnormality relates to the FBC indices and clinical symptoms?

3. What's the possible diagnosis and what other laboratory test you may suggest to help the acurate diagnosis?

Question 4

Explaine why G6PD deficiency is more incident in malaria endemic regions.

END OF SECTION B

You have completed the test. Please place the multiple choice questions answer sheet that you used for Section A inside the answer booklet. Please ensure that your name and student number are clearly indicated on your Answer Sheet and at the top of this examination paper.